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Note on the antennal morphology of the Genus *Lonomia* WALKER 1855 (Lepidoptera: Saturniidae, Hemileucinae)

by

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Anmerkungen zur Antennenmorphologie in der Gattung *Lonomia* WALKER 1855 (Lepidoptera: Saturniidae, Hemileucinae)

Zusammenfassung: Es wird eine kurze Übersicht über die für Saturniiden ungewöhnliche Antennenmorphologie der Gattung *Lonomia* gegeben. Anhand von rasterelektronenmikroskopischen Bildern der Antennen zweier Vertreter der beiden Untergattungen *L. (Lonomia)* und *L. (Periga)* werden die bipektinaten Antennen der Männchen und die Sinneshügel dargestellt.

The genus *Lonomia* WALKER possesses a combination of "primitive" and "specialized" characters that have puzzled researchers of the Saturniidae. MICHENER (1952) noted, along with two genitalic characters, two antennal characters as the most important features for diagnosis of this genus. Those characters are
(1) bipectinate antennae in the male and
(2) antennal cones which arise from ventral projections of the apical segments in both sexes.
Additionally, he used six antennal characters to differentiate the two subgenera now included in *Lonomia: L. (Lonomia)* and *L. (Periga* WALKER 1855). LEMAIRE subsequently described most of the species in the group. In his thorough review of the genus, LEMAIRE (1972) also described and illustrated the antennae of both subgenera, but MINET (1991) stressed the need for more study of the antennae of *L. (Periga),*

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especially the way in which the rami arise from the antennal shaft. In the Bombycoidea the rami generally arise ventrally from the flagellomeres, but in the Saturniidae the rami arise dorsally or nearly so. *L. (Lonomia)* conforms to the latter structure, but *L. (Periga)* demonstrates an intermediate situation.

As part of our ongoing studies on the Saturniidae, we made scanning electron photomicrographs of the male antennae of *Lonomia* which we present here with the hope they will aid other researchers studying saturniid phylogeny. We selected male specimens of two species of each subgenus for our study: *L. (Lonomia) electra* DRUCE, *L. (L.) achelous* (CRAMER), *L. (Periga) cluacina* DRUCE and *L. (P.) angulosa* LEMAIRE, and found no differences within each subgenus. Our findings agree with previous papers describing the antennae of *Lonomia* (MICHENER 1952, LEMAIRE 1972, MINET 1994). The object of this note is to further illustrate antennal characters of potential phylogenetic importance.

Lonomia (Lonomia). – Antennal shaft scaled only on proximal portion (Fig. 1); rami arising from upper portions of flagellomeres (Fig. 1); when present, only a few dorsal sensillae on some inner rami; ventral sensillae of the shaft conspicuous to base (Fig. 2); antennal cones arising on moderate-sized projections (Fig. 5).

Lonomia (Periga). – Antennal shaft densely scaled dorsally (Figs. 3, 6); rami arising from lateral portions of flagellomeres (Fig. 4); dorsal sensillae present on inner rami (Fig. 3); ventral sensillae absent (Fig. 4), except for apical cone-bearing projections; antennal cones arising from large projections and forming a comb at apex of antenna (Figs. 6, 7).

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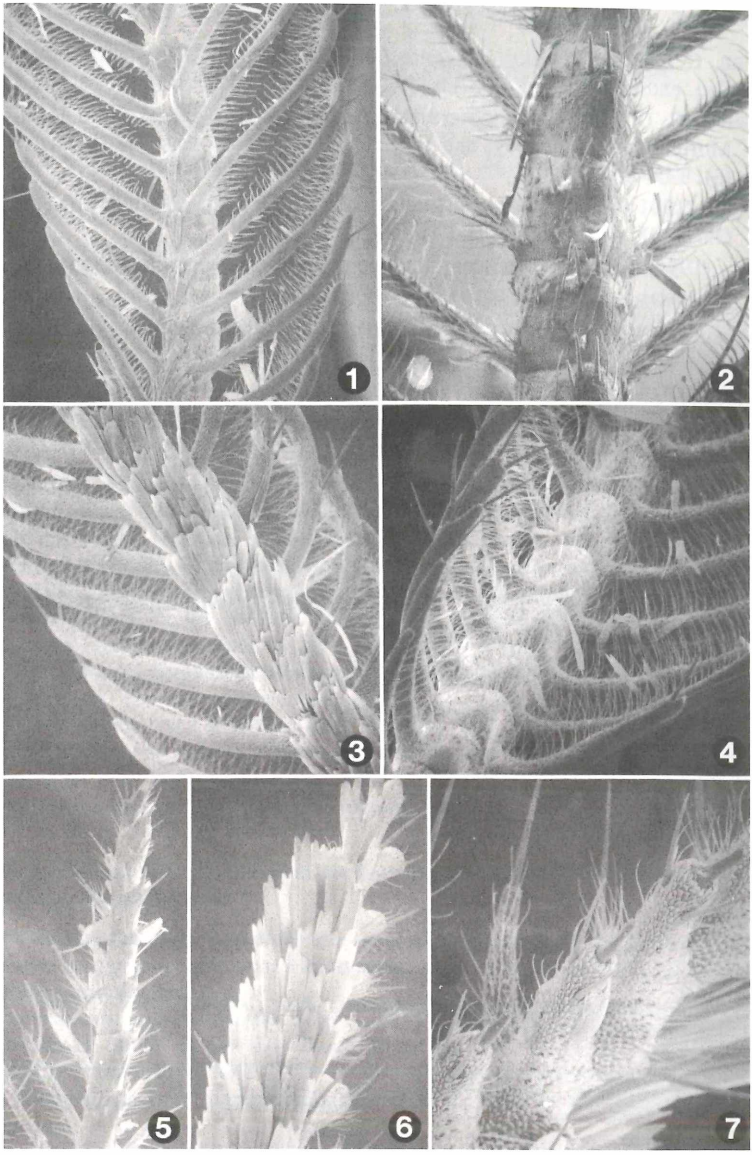

Figs. 1–7: Left male antennae of two *Lonomia* subgenera, with anterior up: **Fig. 1:** *L. (Lonomia) electra.* Dorsal view. **Fig. 2:** *L. (Lonomia) electra.* Ventral view. **Fig. 3:** *L. (Periga) cluacina.* Dorsal view. **Fig. 4:** *L. (Periga) cluacina.* Ventral view. **Fig. 5:** *L. (Lonomia) electra.* Ventrolateral view. **Fig. 6:** *L. (Periga) cluacina.* Laterodorsal view. **Fig. 7:** *L. (Periga) cluacina.* Ventral view, showing preapical antennal cones.

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